

REMARKS

Rejected claims 88 and 118 have been canceled. Claims 81, 82, 84, 86 and 89-111 have been rejected under 350 USC §102(e) as being anticipated by McGee et al. '695 and also by Cox et al. '543. These rejections are respectfully traversed with respect to these claims as now amended herein.

These claims now specifically recite “a flexible ablation device including a flexible body portion defining an outer surface that is substantially transparent to ablation energy and at least one ablation element operably disposed within the body portion to transmit ablation energy therethrough; and a shield disposed within a portion of the body portion for directionally controlling ablation energy emitted therefrom through the outer surface.”

In addition, the dependent claims are further restricted by various specific definitions, for example, of a shield disposed to reflect ablative energy in a selected direction, electromagnetic ablative energy, frequency ranges of electromagnetic ablative energy, antenna configurations, component structures and materials and physical properties.

These aspects of the claimed invention are not disclosed in either of the cited references. Specifically McGee et al. '695 is understood to disclose annular conductive electrodes that are disposed as spaced rings along the length of an ablation probe, and that are operated in one mode as ablation electrodes that contact

tissue to be ablated, and in another mode as sensing electrodes in contact with the tissue to determine the electrical properties of the ablated tissue. There is no disclosure of such electrodes including a shield or shields to direct electromagnetic energy in a controlled direction, or that such electrodes are disposed out of contact with ablated tissue by a flexible body, as claimed by applicants.

Nor does Cox et al. '543 disclose a shield for directing ablative energy (predominantly cryogenic). Although this reference suggests other forms of ablative energy such as ultrasonic, RF, laser, and the like, and also discloses an insulative sleeve 304 of flexible, low thermal conductivity material, the disclosure is nevertheless deficient of the specific elements as now claimed by applicants.

It is therefore respectfully submitted that the deficient disclosure of each of these cited references fails to establish a *prima facie* basis from which anticipation can properly be determined. These claims are therefore submitted to be patentably distinguishable over the cited art.

Rejected claims 102, 104 and 118-121 have been canceled.

Claims 81, 82, 84, 86, 89-90, 101, 103, 105-111, 122 and 123 have been rejected under 35 USC §102(b) as being anticipated by Roth et al. '672. This rejection is respectfully traversed with respect to these claims as amended herein.

These claims now specifically recite "a flexible ablation device including a flexible body portion defining an outer surface that is substantially transparent to

ablation energy and at least one ablation element operably disposed within the body portion to transmit ablation energy therethrough; and a shield disposed within a portion of the body portion for directionally controlling ablation energy emitted therefrom through the outer surface”. In addition, the dependent claims are further restricted, for example, by specific recitations as discussed in the above Remarks with reference to claims 81, 82.

These aspects of the claimed invention are not disclosed by Roth et al. ‘672 which is understood to rely upon a urethral cannula or catheter for positioning an optical tissue-necrosing device (Col. 5, lines 39-43) in proximity to an enlarged prostate organ. More significantly, there does not appear to be a shield disposed to reflect tissue-necrosing energy of a laser in a selected direction, in a manner as claimed by applicants for ablative energy transmitted to target tissue. Additionally, this reference is understood to necrose dots, not linear lines of tissue, and would not be suitable within the appropriate state of the art for ablating heart tissue. Nor does this reference disclose the arrangement of elements in the structure as now claimed, for example, to dispose the ablative element out of contact with the target tissue for operation from within the flexible body. The deficient disclosure of this reference thus fails to establish even a *prima facie* from which a determination of anticipation can be properly determined. It is therefore respectfully submitted that these claims as amended are now patentably distinguishable over the cited art.

New claims 124-129 presented herewith are also submitted to be patentably distinguishable over these cited references.

Claims 93-101 have been rejected under the judicially-created doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 6,312,427. This rejection is respectfully traversed.

These dependent claims specifically recite “a flexible ablation device including a flexible body portion defining an outer surface that is substantially transparent to ablation energy and at least one ablation element operably disposed within the body portion to transmit ablation energy therethrough; and a shield disposed within a portion of the body portion for directionally controlling ablation energy emitted therefrom through the outer surface”. These dependent claims are further restricted by specific recited limitations, for example, regarding the frequency range of electromagnetic energy, and the shapes of antennae and shield. These aspects of the claimed invention are not identical to the patent claims, as the Examiner observes, and are submitted to be patentably distinguishable over the cited claims.

A Terminal Disclaimer may be submitted in the event deemed necessary to place this application in condition for allowance.

Favorable reconsideration and early allowance are solicited.

Respectfully submitted,
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